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PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

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Applicant(s): Steven J. CARPENTER

For: APPARATUS AND PROCESS FOR SURFACE TREATING INTERIOR OF WORKPIECE

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Commissioner for Patents
P.O. Box 1450
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APPELLANT'S BRIEF ON APPEAL

Sir:

This Appellant's Brief on Appeal is being filed pursuant to the provisions of 37 CFR §41.37.

REAL PARTY IN INTEREST

Roto-Finish Company, Inc. is the Assignee of the present application and the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences with respect to the present application.

STATUS OF CLAIMS

All of the claims presently pending in this application are as follows:

Claims 19-40, 42, and 45-54.

Claims 1-18, 41, 43 and 44 have been cancelled.

Claims 19-40, 42, 49 and 50 have been allowed, and Claims 47 and 48 have been indicated as allowable if rewritten in independent form including all of the limitations of the base and intervening claims from which they depend.

Claims 45, 46 and 51-54 are rejected. The outstanding rejections against Claims 45, 46 and 51-54 are being appealed.

STATUS OF AMENDMENTS

No amendment was filed subsequent to the Office Action mailed June 9, 2005, and the status of the claims as currently pending in the application are as set forth in the Office Action of June 9, 2005, subject to the subsequent indication of allowability of claims as explained in the Examiner Interview Summary mailed October 5, 2005.

This Appeal Brief is proceeding on the understanding that only Claims 45-46 and 51-54 remain under rejection, as set forth in the Office Action mailed June 9, 2005, and that the pending claims are as presented in the Reply filed on March 17, 2005.

SUMMARY OF CLAIMED SUBJECT MATTER

As an initial general overview of the subject matter as defined in the main claims pending herein, as currently under appeal, this invention relates to a process for treating the boundary walls of an interior chamber formed in a workpiece, such as a casting. In accordance with the inventive process, a pair of substantially identical and opposed nozzles have their discharge ends inserted through access openings into opposite ends of the interior chamber, and the nozzles are positioned so that a small gap is defined between the opposed discharge ends of the aligned nozzles. Substantially identical streams of pressurized blasting media, each stream being defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, are discharged from the opposed aligned nozzles so that the streams directly impact, whereby the solid abrasive particles in the opposed streams also directly impact, thus creating a

substantially annular pattern which is discharged substantially perpendicularly outwardly from the nozzle discharge direction to thus create an annular band of high energy impact with the surrounding boundary wall. This impact hence occurs dominantly in a substantially perpendicular orientation. The pair of opposed nozzles are synchronously moved lengthwise of the interior chamber, while maintaining the gap between the discharge ends thereof, so that the annular band of high energy impact on the surrounding boundary wall is progressively moved lengthwise along the interior chamber to effect desired treating of the boundary wall.

In the process of the present invention, the provision of the substantially identical nozzles disposed in direct opposed relationship to one another, and the discharging of substantially identical streams of pressurizing blasting media from both nozzles hence relies on the direct impact of the solid blasting media in the opposed streams to effect deflection of the streams of blasting media radially outwardly generally in an annular array so as to effect the desired concentrated impact of the deflected streams against the surrounding interior wall of the chamber. This desired annular pattern of high energy impact in generally perpendicular relationship to the surrounding wall is achieved due to the opposed impacting streams of blasting media being substantially identical.

Claim 51

Claim 51 defines a process for treating the boundary walls of an interior chamber formed in a workpiece, which process includes the steps of:

"providing first and second substantially identical elongated nozzle members having discharge openings at tip ends thereof" (Paragraphs 0032, 0033 and 0035),

"inserting the first and second nozzle members (71, 71A) into the interior chamber (81) through the respective first and second access openings (82, 83) so that the nozzle members are substantially aligned and the

discharge openings thereof are positioned in closely adjacent and directly opposed relationship to one another and define an unobstructed gap (91) therebetween" (paragraph 0039),

"simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings (74, 74A) of said first and second nozzle members (71, 71A)" (paragraph 0041, 0080),

"simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings (74, 74A) of said first and second nozzle members (71, 71A) so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap (91) and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relation to the flow direction of the discharged streams to define a surrounding annular pattern (92) for high energy impact with the boundary wall of the chamber (81) in surrounding relationship to the gap (91)" (paragraph 0041), and

"simultaneously moving the nozzle members, while maintaining them in substantially stationary lengthwise relationship to one another, lengthwise in one direction along the interior chamber (81) parallel to the discharge direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall lengthwise of the interior chamber" (paragraph 0041).

Claims 52-54 are all either directly or indirectly dependent from Claim 51.

Claim 52 further restricts Claim 51 by defining the streams discharged from the nozzle members having a velocity in the range of 30 feet to 250 feet per second, and Claim 53

further restricts Claim 52 by defining the carrier fluid supplied to the discharge nozzles being air at a pressure of about 80 to 90 psi.

Claim 54 depends from Claim 51 and recites the additional step of moving the nozzles in the opposite direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall lengthwise thereof as the nozzles are moved in the opposite lengthwise direction.

Claim 45

Claim 45 defines a process for treating the boundary wall of an interior chamber formed in a casting, and includes the steps of:

"providing a casting (W) having an elongate interior chamber (81) therein which is at least partially closed at opposite ends thereof by respective opposite walls of the casting and having first and second aligned access openings (82, 83) respectively formed in the opposite walls of the casting for respective communication with opposite ends of the interior chamber (81), said access openings being of smaller cross section than said interior chamber" (paragraph 0039, 0040),

"providing first and second substantially identical elongate nozzle members (71, 71A) having substantially identical discharge openings (74, 74A) at tip ends thereof..." (paragraph 0032, 0033, 0035)

"providing first and second movable supports (72, 72A)" for the nozzle members, and "positioning said first and second supports on opposite sides (see Figure 4) of the casting (W) so that the nozzle members are in opposed and aligned relationship...with the tip ends...in generally aligned relationship with said first and second access openings (82, 83)",

"relatively moving the first and second support members toward one another so as to insert the first and second nozzle members into the interior chamber through

the respective first and second access openings so that the nozzle members are substantially aligned and the discharge openings thereof are positioned closely adjacent and in directly opposed relationship to one another and define a small unobstructed gap therebetween, the nozzle members being entirely supported by and cantilevered from the respective supports when positioned within said interior chamber" (paragraph 0039),

"simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings (74, 74A) of said first and second nozzle members (71, 71A)" (paragraph 0041, 0080),

"simultaneously discharging substantially identical and opposed high velocity streams of blasting media from said discharge openings of said first and second nozzle members (71, 71A) so that the discharged streams, almost immediately after discharge, directly impact one another within said small gap (91) and cause the blasting media of both streams to be deflected outwardly in substantially perpendicular relationship to the flow direction of the discharged streams to define a surrounding annular pattern (92) for high energy impact with a boundary wall of the interior chamber (81) in surrounding relationship to the small gap (91)" (paragraph 0041), and

"simultaneously moving the nozzle members (71, 71A), while maintaining them in stationary relationship to one another, lengthwise along the interior chamber (81) parallel to the discharge direction..." (paragraph 0041).

Claim 46 depends from 45 and further defines the gap between the discharge ends of the nozzles being no more than about one inch, and further specifies that, after treating the boundary wall with abrasive media, the process includes terminating the entrainment of abrasive particles in the high-

velocity carrier fluid while continuing to supply the pressurized carrier fluid to the nozzle members as they are moved along the chamber to effect removal of abrasive particles and debris from the chamber.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following are the grounds of rejection to be reviewed on appeal:

1. The rejection of Claims 51-54 under 35 U.S.C. 103(a) as unpatentable over British Patent No. 631 417 in view of the obviousness assertions by the Examiner as set forth in paragraph 2 of the Office Action mailed June 9, 2005.

2. The rejection of Claim 45 under 35 U.S.C. 103(a) as unpatentable over British Patent No. 631 417 in view of U.S. Patent No. 4 995 201 (Von Borcke et al.), as set forth in paragraph 3 of the Office Action mailed June 9, 2005.

3. The rejection of Claim 46 (which depends from Claim 45) under 35 U.S.C. 103(a) as unpatentable over British Patent No. 631 417 in view of Von Borcke '201, as applied above against Claim 45, further in view of U.S. Patent No. 5 441 441 (Cook et al.), as set forth in paragraph 4 of the Office Action mailed June 9, 2005.

ARGUMENT

INITIAL DISCUSSION RE APPLIED REFERENCE

Prior to launching into an immediate discussion of British Patent No. 631 417 (herein GB '417) and its use in the rejections against the claims, there is presented below a brief description of the process disclosed in the GB '417 patent.

General Discussion re British Patent No. 631 417

GB '417 illustrates a process for shot or grit blasting the interior of a pipe, which process employs aligned but opposed nozzles b and c which are spaced apart and which both

function as discharge structures. The nozzle b has a rather large diameter passage extending therethrough, and GB '417 discloses that a stream "a" of solid particles such as shot is discharged from the nozzle by an air blast. The opposed nozzle c discharges solely a counterblast of air, that is, this counter nozzle c does not discharge any solid medium. Further, as is readily apparent from the drawing, the diameter of the solid media discharge passage associated with nozzle b is significantly larger than the diameter of the air blast discharge passage associated with nozzle c, whereby these nozzles b and c are not substantially identical. Further, the nozzles b and c clearly do not discharge identical but opposed streams of blasting media.

Further, the principle of operation allegedly employed by the process of GB '417 is based on the principle that the opposed or "counterblast air stream" as discharged from the nozzle c is capable of sidewardly deflecting the solid particles discharged from the main nozzle b, as clearly stated in Column 2, lines 22-25 and lines 35-42. GB '417 hence relies on the apparent ability of presumably very high-velocity air discharged from nozzle c being capable of deflecting the solid shotpeen or other solid media, as discharged in opposed and coaxial relationship to the counterblast air stream, sidewardly for impingement against the surrounding wall. GB '417 thus relies on the ability of presumably high-velocity air to effect right-angle deflection of solid mass particles such as shotpeens. GB'417 does not rely on or provide any direct impact of opposed flowing solid mass particles to cause the transverse deflection thereof.

CLAIM 51 IS PATENTABLE OVER GB '417 IN VIEW OF EXAMINER'S OBVIOUSNESS ASSERTIONS

In the rejection of Claim 51, as set forth in paragraph 2 on page 2 of the Office Action mailed June 9, 2005, the Examiner concludes that GB '417 discloses all of the limitations defined by the process of Claim 51 "except for

disclosing supplying 'equal' streams to the nozzles both having solid abrasives". In an effort to overcome this latter deficiency of GB '417, the Examiner concludes that it would be obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of GB '417 by supplying streams of abrasive and air through both nozzles "(inherently meeting the 'equal' limitations for the radial deflection to be vertical) in applications where stronger abrasion is required". It is noted that the Examiner, in reaching this conclusion, is not relying on any secondary teaching for motivating such change, but rather appears to be relying solely on the hindsight teaching of the invention disclosed in this application. It is submitted, as explained in greater detail below, that there is no motivation or suggestion for the Examiner's proposed modification of the process taught by GB '417, and it is further submitted that the Examiner's misapplication and misunderstanding is readily evidenced by the statement of "inherently meeting the 'equal' limitations for the radial deflection", particularly since GB '417 illustrates in the single drawing that the deflection direction is radial, even though the opposed streams are not "equal" as admitted by the Examiner. The Examiner's conclusion with respect to "inherent" resulting operation hence appears to be inconsistent with the disclosure already presented by GB '417.

More specifically, as pointed out above, Claim 51 is directed to a process for treating the interior boundary wall of a chamber, and involves the steps of "providing first and second substantially identical elongated nozzle members", "simultaneously supplying substantially identical streams of pressurized blasting media as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings of the first and second nozzle members", "simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge

openings of said first and second nozzle members so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relationship to the flow direction" for high energy impact with the surrounding boundary wall of the chamber. This process is clearly neither suggested by nor inherently taught by GB '417.

For example, in GB '417 the process does not involve "substantially identical elongated nozzle members" disposed in opposed relationship. As clearly illustrated by the drawing of GB '417, the nozzles b and c are significantly different from one another since the discharge passage formed in nozzle b is clearly disclosed as being of significantly greater diameter than the discharge passage formed in opposed nozzle c. Further, there is no disclosure in GB '417 as to the criticality of providing opposed identical discharge nozzles, and in fact the lack of such criticality in the GB '417 process is evidenced by the fact that the discharge passage of nozzle b as shown in the drawing has a diameter which is more than 1.5 times the diameter of the discharge passage of nozzle c. The discharge passage of nozzle b hence has a cross-sectional flow area which is more than double the cross-sectional flow area of the discharge passage in nozzle c, whereby the streams discharged from these opposed nozzles will always inherently have significantly different properties with respect to either their velocity and/or mass as discharged from the respective nozzles, and this effects the resulting dispersion pattern when the opposed streams impact.

In addition, while Claim 51 calls for a process wherein "substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein" are supplied to the pair of opposed identical nozzles, GB '417 on the other hand does not discharge abrasive streams from both opposed nozzles, and also does not discharge equal streams

from both opposed nozzles. Rather, GB '417 discloses different nozzles discharging different and non-equal streams. More specifically, the nozzle c of GB '417 is supplied solely with pressurized air, whereas nozzle b is supplied with an abrasive media which is a "stream of shot a...impelled axially, by an air blast, through an axially disposed nozzle b" (Column 2, lines 35-37). GB '417 hence does not simultaneously supply substantially identical streams of pressurized blasting media to both opposed nozzles.

As a result, GB '417 discharges opposed streams which are totally different from one another. For example, the stream in GB '417 as discharged from nozzle b is discharged over a significantly large discharge area cross section, and the discharged stream includes solid particles (such as peens) contained in an air blast. Conversely, the stream discharged from the opposed nozzle c is discharged over a much smaller cross-sectional discharge area, and this stream consists solely of air (that is, the stream discharged from nozzle c is free of solid particles). The opposed streams discharged by nozzles b and c of GB '417 hence are significantly different as evidenced by the totally different cross-sectional areas of the flow passages defined through the opposed nozzles b and c, and as further evidenced by the fact that the abrasive stream is supplied solely to the nozzle b whereas solely a pressurized air stream is supplied to the opposed nozzle c. The opposed and impacting streams from nozzles b and c hence clearly do not involve the process of the present invention which specifies "simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings of said first and second nozzle members".

In light of the many significant deficiencies associated with the process taught by GB 417 as discussed above, the Examiner attempts to gloss over these deficiencies by asserting that it would be obvious to one of ordinary skill to supply the nozzles of GB 417 with "equal" streams each having

abrasive particles. It is submitted that the Examiner's obviousness assertion is wholly without support since the Examiner cites no secondary prior art for supporting this conclusion. Rather, the Examiner appears to be concluding, without any supporting documentation, that it would be obvious to first make the discharge passages in the GB '417 nozzles the same, that it would thereafter be obvious to supply abrasive particles to the streams supplied to both nozzles, and that it would still thereafter be obvious to ensure that the abrasive streams supplied to the equal nozzles are themselves equal. It is submitted that, in light of the teaching in GB '417 as evidenced by the spray pattern allegedly achieved by the GB '417 process, one first has to question why anyone would attempt to modify the GB '417 process since it allegedly is already achieving a radial deflection pattern. Not only is there no suggestion in GB 417 for making any modifications in the process disclosed and claimed therein, but GB '417 contains no motivation or suggestion for attempting to modify the GB '417 process. Rather, it is believed apparent that the Examiner's only motivation for modifying GB '417 to include substantially identical nozzles, to supply abrasive streams to both nozzles, and to make both abrasive streams identical, is taught only by the teachings contained in this application. The Examiner's attempt to modify GB '417 is most assuredly a hindsight modification of the GB '417 process which is clearly neither motivated nor taught by GB '417, and in fact GB '417 teaches a process which in actuality would motivate one to not adopt the inventive process as defined herein.

It is recognized that the Examiner is asserting that one of ordinary skill would be able to make the proposed modifications suggested by the Examiner based solely on the disclosure of the GB '417 patent. It is submitted that such assertion by the Examiner is improper since nowhere is there any motivation for making such modification in the GB '417 process. Such motivation appears only in the disclosure of

the present invention, and utilization of this disclosure as a motivation for the changes asserted by the Examiner is clearly an improper hindsight reconstruction of the prior art.

To reject a claim based on obviousness under 35 U.S.C. 103, it is believed that the PTO's standards as set forth in the MPEP, Rev. dated October 2005, §706.02(j), clearly evidence the erroneous nature of the outstanding rejection against Claim 51. Quoting, the MPEP states that to "establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure".

The above requirements as set forth in the MPEP each appear to be violated when one considers the outstanding rejection of Claim 51 based on GB '417 when modified in accordance with the Examiner's assertions. As to the first requirement, it is submitted that there is no teaching or suggestion or motivation to modify the process of GB '417 in the manner proposed by the Examiner. GB '417 clearly does not disclose or even remotely suggest the modifications suggested by the Examiner. As to the second requirement, namely as to a reasonable expectation of success, it is submitted that there is no reason to assume that the modifications required in the GB '417 process in order to meet the limitations of Claim 51 would result in a successful operation. In fact, if one assumes that GB '417 evidences a successful operation as disclosed by the drawing therein, then one would also have to question whether incorporating therein the modifications required by Claim 51 would seriously disrupt or even prevent

the GB '417 process from being successfully carried out. Lastly, as to the requirement that the combination of references (or in this case the Examiner's proposed modification of GB '417) teach or suggest all of the claim limitations, it is again submitted that all of the limitations required by Claim 51 are not present in the Examiner's proposed modification of GB '417 since the Examiner's proposal of merely supplying abrasive streams through both nozzles does not inherently meet all of the limitations of the present invention since even if both nozzles of GB '417 are supplied with abrasive streams, there is nothing that requires that the streams be equal or that the nozzles be equal.

In summary, the outstanding rejection of Claim 51 based on GB '417 in view of the Examiner's asserted obvious variations thereto, fails to comply with the requirements of 305 U.S.C. §103, but rather is an obvious hindsight attempt to reconstruct the claimed invention based on the disclosure of this application. Claim 51 is hence neither suggested nor taught by GB '417, either with or without the limitations suggested by the Examiner, as required under 35 U.S.C. 103.

Claims 52-54 all depend from Claim 51 and were rejected under 35 U.S.C. 103(a) based on GB '417 as applied against Claim 51 discussed above. Claims 52-54 are herein grouped with Claim 51 and are not being separately argued. These claims are believed allowable, however, along with Claim 51 for the same reasons set forth above.

CLAIM 45 IS PATENTABLE OVER GB '417 IN VIEW OF VON BORCKE (4 995 201)

Claim 45 has been rejected based on GB '417 in view of Von Borcke '201. The rejection of Claim 45 generally corresponds to the rejection imposed with respect to Claim 51 discussed above with respect to the application of the GB '417 reference. The Examiner is relying on Von Borcke '201 as a secondary reference for showing "pipes having radially enlarged portion or having ends partially closed are known as evident by Von Borcke et al." (see paragraph 3, page 3 of

Office Action mailed June 9, 2005). The GB '417 process, when considered in view of Von Borcke '201, further in view of the Examiner's asserted modifications to the GB '417 process, fails to teach the process defined by Claim 45 as required by 35 U.S.C. 103, as discussed below, and for substantially the same reasons as discussed in greater detail above relative to Claim 51.

More specifically, Claim 45 is specifically directed to a "process for treating the boundary walls of an interior chamber formed in a casting", and includes the following limitations associated with the process:

(1) "providing a casting having an elongate interior chamber therein which is at least partially closed at opposite ends thereof by respective opposite walls of the casting and having first and second aligned access openings respectively formed in the opposite walls of the casting for respective communication with opposite ends of the interior chamber, said access openings being of smaller cross section than said interior chamber",

(2) "providing first and second substantially identical elongate nozzle members having substantially identical discharge openings at tip ends thereof",

(3) "simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said first and second nozzle members", and

(4) "simultaneously discharging substantially identical and opposed high velocity streams of blasting media from said discharge openings of said first and second nozzle members so that the discharge streams, almost immediately after discharge, directly impact one another within said small gap and cause the blasting media of both streams to be deflected outwardly in substantially perpendicular relationship to the flow direction of the discharged streams to define a

surrounding annular pattern for high energy impact with a boundary wall of the interior chamber".

With respect to limitations of Claim 45 as summarized in subparagraphs (2), (3) and (4) above, all of these limitations are similar to limitations discussed in detail above relative to Claim 51 and hence are believed to clearly define process features which are neither disclosed nor suggested by GB '417, nor is there present any motivation for incorporating such features into a modified GB '417 process. The Von Borcke '201 patent is also totally deficient with respect to the limitations associated with subparagraphs (2), (3) and (4) as set forth above.

In addition, Claim 45 further specifies that the workpiece is a casting having an elongate interior chamber, with this interior chamber being accessible through smaller access openings which are formed through walls defined at opposite ends of the interior chamber, which smaller access openings allow the substantially identical nozzle members to be inserted into the interior chamber from opposite ends thereof for disposition in opposed aligned relationship. The process of this invention and specifically its application for treating an interior wall of a casting is particularly desirable, and in fact solves a long term problem with respect to treating interior walls of some castings, such as a casting which is intended to function as a valve housing. In such a casting the interior chamber is formed using a core which is allowed to disintegrate so that the core material can be removed through the much smaller access openings. Treating the interior wall of a casting interior chamber has hence been difficult, time consuming and oftentimes results in a less than desired initial treating or cleaning of the interior surface. With the present invention, however, it has been discovered that significantly improved access and, as a result, significantly improved cleaning and treating of the interior cast surface can be achieved.

As to this process as claimed by Claim 45 and its application to a casting, specifically as defined by limitation (1) above, it is further submitted that this limitation as associated with the claimed process is neither suggested nor taught by either GB '417 or Von Borcke '201. More specifically, GB '417 merely discloses treating an interior surface such as a cylindrical surface which is disclosed and illustrated principally as an elongate pipe or tube. Von Borcke '201 similarly illustrates a very specialized brushing and spraying head which is inserted into the interior of a pipe or tube, specifically a pipe or tube having a diameter step down through a ramp. Neither GB '417 or Von Borcke '201, however, disclose the additional problems associated with both accessing and cleaning or treating an interior chamber in a casting, particularly a chamber in a casting whereby access is only through smaller cross-section access openings associated with opposite ends of the chamber. It is readily evident that such would not be intended by Von Borcke '201 since the head structure illustrated in Figure 2 of Von Borcke occupies substantially the entire cross section of the tube.

In summary, Claim 45 is believed to patentably distinguish over GB '417 in view of Von Borcke '201 for substantially the same reasons presented above with respect to Claim 51, and is believed to additionally patentably distinguish over these same references due to their additional deficiency with respect to recognizing and defining the additional problems and complications associated with treating an interior surface of a chamber defined in a casting.

Claim 45 is accordingly believed to represent a nonobvious and hence patentable invention under 35 U.S.C. §103 in light of either GB '417 or Von Borcke '201, whether considered singularly or in combination.

Claim 46 depends from Claim 45 and is believed allowable therewith for the same reasons. Claim 46, however, further restricts Claim 45 by additionally specifying that the

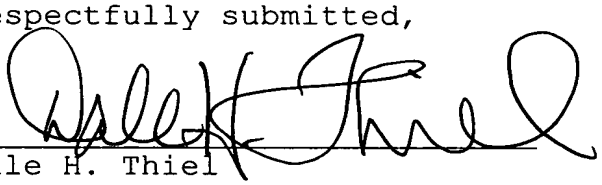
treatment of the boundary wall with the abrasive particles is terminated by terminating the entrainment of the abrasive particles in the high-velocity carrier fluid, while at the same time the high-velocity carrier fluid is still supplied to the nozzle members as they move synchronously along the chamber so that the high-velocity carrier fluid is then used to effect removal of abrasive particles and debris from the chamber. The Examiner reliess on Cook '441 as a secondary reference for allegedly teaching this feature, and asserts that inclusion of this feature into the other applied references would be obvious. While Cook '441 does illustrate (See Figure 2) a system whereby a mixture of water, air and abrasive can be supplied to a nozzle, nevertheless the overall purpose of the system and process disclosed by Cook '441 is totally different, and in fact totally nonanalogous to the process of both GB '417 as well as the process of this invention. In fact, the title of Cook '441 itself evidences the nonanalogous nature of the Cook disclosure since the title "METHOD FOR REMOVAL OF SURFACE CONTAMINANTS FROM CONCRETE SUBSTRATES" clearly indicates a process which is intended for use with a totally surface or body and the process is obviously intended for use under totally different conditions for a different purpose. The totally different and nonanalogous technology associated with the Cook '441 process hence is such as to cause one to question how one of ordinary skill in the art to which the present invention pertains would be expected to look to technology of the type disclosed by Cook '441 for a teaching or suggestion. Rather, it is believed that these technologies are so far removed that one associated with the technology of the present invention would not be motivated to look to the technology associated with Cook '441. Claim 46 is hence not only believed allowable for substantially the same reasons advanced with respect to parent Claim 45 above, but is also believed to additionally patentably distinguish over the applied references under 35 U.S.C. §103 in view of the remote and nonanalogous nature of

Cook '441, and hence the nonobviousness of attempting to combine the teaching therefrom with the wholly different process of GB '417.

SUMMARY

For reasons outlined in detail above, Appellant respectfully submits that all of Claims 51-54 and 45-46 as pending herein, all of which have been rejected as unpatentable due to an assertion of obviousness based principally on GB '417, are believed to patentably distinguish over the prior art as applied by the Examiner. Reversal of the outstanding rejections with respect to all of pending Claims 51-54 and 45-46 is respectfully requested.

Respectfully submitted,



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Encl: Claims Appendix
Evidence Appendix
Related Proceedings Appendix
Postal Card

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CLAIMS APPENDIX

19. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece having a plurality of interior chambers which are sidewardly spaced apart and transversely interiorly interconnected, and first and second aligned access openings communicating with opposite ends of each respective interior chamber;

providing pluralities of first and second nozzle members positioned so that each of said first nozzle members is disposed in opposed relationship to a corresponding one of said second nozzle members;

simultaneously inserting all of said first nozzle members into the workpiece and also simultaneously inserting all of the second nozzle members into the workpiece so that each of the opposed pairs of first and second nozzle members is positioned within a respective one of the interior chambers and discharge openings of the opposed first and second nozzle members are positioned closely adjacent and directly opposed to one another;

simultaneously supplying substantially equal streams of pressurized blasting media, as defined by a pressurized carrier fluid having solid abrasive particles entrained therein, to the discharge openings of all of the first and second nozzle members;

simultaneously discharging substantially equal and opposed high-velocity streams of blasting media from said discharge openings so that the discharged streams, almost immediately after discharge, directly impact one another to cause the blasting media to be deflected radially outwardly in a surrounding annular pattern for high energy impact with the boundary wall of the respective interior chamber; and

simultaneously moving the nozzle members, while maintaining them in generally fixed relationship to one another, along the respective interior chamber so that the blasting media as deflected radially outwardly into the annular pattern progressively treats the boundary wall of the respective interior chamber.

20. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece having a plurality of interior chambers which are sidewardly spaced apart and transversely interiorly interconnected, and first and second aligned access openings communicating with opposite ends of each respective interior chamber;

providing first and second nozzle members with opposed discharge openings;

aligning said first and second nozzles with opposite ends of a first one of said interior chambers and then inserting said nozzles into the chamber with a defined small gap between the opposed discharge openings thereof;

synchronously moving the first and second nozzle members linearly along the chamber while supplying substantially equal streams of pressurized blasting media, as defined by a pressurized carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said nozzle members to simultaneously discharge substantially equal and opposed high-velocity streams of blasting media from said discharge openings so that the discharged streams, almost immediately after discharge, directly impact one another to cause the blasting media to be deflected radially outwardly in a surrounding annular pattern for high energy impact with the boundary wall of the chamber;

thereafter withdrawing the first and second nozzle members from said opposite ends of the first chamber and transversely displacing the first and second nozzle members relative to the workpiece so that the nozzle members align with opposite ends of a second one of said interior chamber; and

thereafter inserting the nozzle members into the second interior chamber and effecting treatment of the boundary wall thereof in the same manner as with respect to the first chamber as defined above.

21. An apparatus for treating boundary walls of an interior chamber formed in a workpiece and which is accessible through first and second access openings which access opposite ends of the interior chamber, said apparatus comprising:

a fixture for positioning the workpiece thereon;

first and second nozzle assemblies positioned on opposite sides of the fixture and respectively including first and second elongate nozzle members which are disposed in generally aligned but opposed relationship, said first and second nozzle members being positioned for insertion through the respective first and second access openings associated with the workpiece when the workpiece is mounted on the fixture;

first and second movable supports which respectively mount the first and second nozzle assemblies thereon;

first and second drive devices interconnected to the respective first and second supports for effecting movement of the respective nozzle assembly from a retracted position wherein the respective nozzle member has a discharge end thereof spaced from the workpiece and an operational position wherein the respective nozzle member is inserted through the respective access opening so that the discharge opening of the nozzle member is positioned within the interior chamber;

said first and second supports and the respective first and second nozzle assemblies mounted thereon being

synchronously movable, while maintaining a substantially fixed spatial relationship between the opposed discharge openings of the nozzle members, to effect movement of the discharge openings within the interior chamber; and

a supply source connected to each of the first and second nozzle members for simultaneously supplying substantially identical pressurized streams of carrier fluid and abrasive particles to both nozzle members for effecting simultaneous discharge from the nozzle members of opposed high-velocity streams of abrasive media defined by said carrier fluid having said abrasive particles entrained therein, whereby the opposed discharged streams directly impact one another within the interior chamber to cause the streams to be deflected radially outwardly in an annular pattern for high energy impact against the boundary walls of the interior chamber.

22. An apparatus according to Claim 21, wherein each of said nozzle members comprises an elongate tubular member having said discharge opening at one end thereof.

23. An apparatus according to Claim 22, wherein said discharge opening is defined within a carbide tip member.

24. An apparatus according to Claim 21, wherein the first and second nozzle assemblies includes plural opposed pairs of first and second nozzle members which are insertable through respective access openings of the workpiece for association with different portions of the interior chamber, the plurality of first nozzle members as well as a plurality of second nozzle members being disposed in generally parallel but sidewardly spaced relationship and being simultaneously movable as a unit.

25. An apparatus according to Claim 21, wherein each of said first and second supports is mounted for generally linear

movement in a direction which is generally parallel with an axis which extends through the interior chamber and aligns with the first and second access openings.

26. An apparatus according to Claim 25, wherein the second support is linearly movably supported on the first support for movement with respect to the first support along a direction which is generally parallel with said axis.

27. An apparatus according to Claim 26, wherein said first drive device is drivingly coupled between said first support and a stationary housing, and wherein said second drive device is drivingly coupled between said first and second supports, whereby activation of said first drive device causes simultaneous linear movement of said first support and said second support.

28. An apparatus according to Claim 21, including a housing structure which includes walls functioning as a shroud for defining therein a treating chamber, said fixture being positioned within said treating chamber, and said nozzle assemblies being disposed on opposite sides of the shroud so that the nozzle members movably project through the shroud for disposition within opposite sides of the treating chamber.

29. An apparatus according to Claim 21, wherein the first and second nozzle assemblies and the respective first and second drive devices are mounted on a transverse movement assembly which permits the first and second nozzle assemblies to be simultaneously transversely displaced relative to the workpiece to permit the nozzles to be sequentially positioned in alignment with different interior chambers of the workpiece.

30. An apparatus according to Claim 21, wherein one of the first and second drive devices has a speed control arrangement associated therewith for varying the speed of movement of the synchronously-moveable first and second nozzles as they linearly traverse the length of the interior passage.

31. An apparatus according to Claim 21, wherein each of said first and second nozzles comprises an elongate nozzle member having a discharge passage extending lengthwise over a significant length thereof and terminating in a discharge opening at one end of the nozzle member, said discharge passage having a length of at least about 8 inches and a maximum diameter of about 1/4 inch.

32. An apparatus according to Claim 21, wherein the distance between the opposed discharge openings of the nozzle members is about one inch.

33. An apparatus according to Claim 21, wherein the distance between the opposed discharge openings of the nozzle members is about one half inch or less.

34. An apparatus according to Claim 21, wherein the distance between the opposed discharge openings of the nozzle members is about 0.100 to about 0.300 inches.

35. An apparatus according to Claim 21, wherein said first and second nozzle assemblies each having an orifice that emits a cylindrical stream of blasting fluid.

36. An apparatus according to Claim 21, wherein said first and second nozzle assemblies are identical.

37. An apparatus for treating boundary walls of an interior chamber formed in a workpiece and which is accessible through first and second access openings which access opposite ends of the interior chamber, said apparatus comprising:

a fixture for positioning the workpiece thereon;

first and second nozzle assemblies positioned on opposite sides of the fixture and respectively including first and second elongate nozzle members which are disposed in generally aligned but opposed relationship, said first and second nozzle members being positioned for insertion through the respective first and second access openings associated with the workpiece when the workpiece is mounted on the fixture;

first and second movable supports which respectively mount the first and second nozzle assemblies thereon;

a drive arrangement interconnected to the respective first and second supports for effecting movement of the respective nozzle assembly from a retracted position wherein the respective nozzle member has a discharge end thereof spaced from the workpiece and an operational position wherein the respective nozzle member is inserted through the respective access opening so that the discharge opening of the nozzle member is positioned within the interior chamber;

said first and second supports and the respective first and second nozzle assemblies mounted thereon being synchronously movable, while maintaining a substantially fixed spatial relationship between the opposed discharge openings of the nozzle members, to effect movement of the discharge openings within the interior chamber; and

a supply source connected to each of the first and second nozzle members for simultaneously supplying substantially identical pressurized streams of carrier fluid and abrasive particles to both nozzle members for effecting simultaneous discharge from the nozzle members of substantially equal but opposed high-velocity streams of abrasive media defined by said carrier fluid having said abrasive particles entrained

therein, whereby the opposed discharged streams directly impact one another within the interior chamber to cause the streams to be deflected radially outwardly for high energy impact against the boundary walls of the interior chamber.

38. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece having an interior chamber with a radial outward enlargement along a part of the length thereof, and having first and second aligned access openings which communicate with opposite ends of the interior chamber;

providing first and second substantially identical elongated nozzle members having discharge openings at tip ends thereof;

inserting the first and second nozzle members into the interior chamber through the respective first and second access openings so that the nozzle members are substantially aligned and the discharge openings thereof are positioned in closely adjacent and directly opposed relationship to one another and define an unobstructed gap therebetween;

simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said first and second nozzle members;

simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings of said first and second nozzle members so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relation to the flow direction of the discharged streams to define a surrounding annular pattern

for high energy impact with the boundary wall of the chamber in surrounding relationship to the gap; and

simultaneously moving the nozzle members, while maintaining them in stationary relationship to one another, lengthwise along the interior chamber parallel to the discharge direction first in one direction and then in the opposite direction while continuing to discharge opposed identical streams of blasting media therefrom so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall of the interior chamber and treats transitional surfaces which join radially between the enlargement and the interior chamber.

39. The process according to Claim 38, comprising the step of initially positioning the opposed discharge openings of the first and second nozzle members with a gap therebetween of no more than about one inch.

40. A process according to Claim 38, including the step of terminating the entrainment of abrasive particles in the high-velocity carrier fluid while continuing to supply the pressurized carrier fluid to the nozzle members as they are synchronously moved within the interior chamber to effect removal of abrasive particles and debris from the chamber.

42. A process according to Claim 49, wherein the movement of the nozzle members is modified so that the nozzle members pause or move at a slower speed when the gap between the nozzle members is substantially aligned with the transverse passage.

45. A process for treating the boundary walls of an interior chamber (81) formed in a casting (W), comprising the steps of:

providing a casting (W) having an elongate interior chamber (81) therein which is at least partially closed at opposite ends thereof by respective opposite walls of the casting and having first and second aligned access openings (82-83) respectively formed in the opposite walls of the casting for respective communication with opposite ends of the interior chamber (81), said access openings being of smaller cross section than said interior chamber;

providing first and second substantially identical elongate nozzle members (71, 71A) having substantially identical discharge openings (74, 74A) at tip ends thereof, the elongate nozzle members having a small exterior cross section which substantially uniformly extends from the tip ends of the nozzle members lengthwise thereof over a substantial lengthwise extent so as to permit the nozzle members to be inserted through the access openings;

providing first and second movable supports (33, 34) which engagingly support the nozzle members (71, 71A) at a location spaced remote from said tip ends (74, 74A) so that the first and second elongated nozzle members (71, 71A) are respectively cantilevered outwardly from the first and second supports (33, 34) in generally aligned, opposed and spaced relationship to one another;

positioning said first and second supports (33, 34) on opposite sides of the casting (W) so that the nozzle members are in opposed and aligned relationship with one another with the tip ends (74, 74A) of the first and second nozzle members (71, 71A) being respectively positioned adjacent and in generally aligned relationship with said first and second access openings (82, 83);

relatively moving the first and second support members (33, 34) toward one another so as to insert the first and second nozzle members (71, 71A) into the interior chamber (81) through the respective first and second access openings (82, 83) so that the nozzle members are substantially

aligned and the discharge openings (74, 74A) thereof are positioned closely adjacent and in directly opposed relationship to one another and define a small unobstructed gap (91) therebetween, the nozzle members (71, 71A) being entirely supported by and cantilevered from the respective supports (33, 34) when positioned within said interior chamber (81);

simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings (74, 74A) of said first and second nozzle members (71, 71A);

simultaneously discharging substantially identical and opposed high velocity streams of blasting media from said discharge openings of said first and second nozzle members (71, 71A) so that the discharged streams, almost immediately after discharge, directly impact one another within said small gap (91) and cause the blasting media of both streams to be deflected outwardly in substantially perpendicular relationship to the flow direction of the discharged streams to define a surrounding annular pattern (92) for high energy impact with a boundary wall of the interior chamber (81) in surrounding relationship to the small gap (91); and

simultaneously moving the nozzle members (71, 71A), while maintaining them in stationary relationship to one another, lengthwise along the interior chamber (81) parallel to the discharge direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall of the interior chamber (81) as defined in the casting (W).

46. The process according to Claim 45, comprising the steps of:

initially positioning the opposed discharge openings (74, 74A) of the first and second nozzle members (71, 71A) with the

small gap (91) therebetween of no more than about one inch; and

after the boundary wall of the interior chamber (81) has been treated with the abrasive media, terminating the entrainment of abrasive particles in the high velocity carrier fluid while continuing to supply the pressurized carrier fluid to the nozzle members (71, 71A) as they are synchronously moved within the interior chamber (81) to effect removal of abrasive particles and debris from the chamber.

47. A process according to Claim 45, including the steps of:

providing the casting with at least one interior passage which communicates with and extends transversely from said interior chamber; and

modifying the movement of the nozzle members so as to pause or slow the movement of the nozzle members when the small gap is substantially aligned with the transverse interior passage so as to permit the deflected annular pattern of blasting media to enter into and effect surface treating of the transverse interior passage.

48. A process according to Claim 45, including the steps of:

providing the interior chamber of the casting with first and second elongate chamber portions which are in aligned communication with one another, said first chamber portion being of smaller cross section and said second chamber portion being of larger cross section; and

modifying the movement of the nozzle members as they move lengthwise of the interior chamber so that the nozzle members move at a slower speed when the small gap is disposed in said second chamber portion in comparison to the speed of the nozzle members when the small gap is moved along said first chamber portion.

49. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece having an interior chamber, first and second aligned access openings which communicate with opposite ends of the interior chamber, and at least one passage which communicates with and extends transversely from said interior chamber;

providing first and second substantially identical elongated nozzle members having discharge openings at tip ends thereof;

inserting the first and second nozzle members into the interior chamber through the respective first and second access openings so that the nozzle members are substantially aligned and the discharge openings thereof are positioned in closely adjacent and directly opposed relationship to one another and define an unobstructed gap therebetween;

simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said first and second nozzle members;

simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings of said first and second nozzle members so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relation to the flow direction of the discharged streams to define a surrounding annular pattern for high energy impact with the boundary wall of the chamber in surrounding relationship to the gap; and

simultaneously moving the nozzle members, while maintaining them in stationary relationship to one another, lengthwise along the interior chamber parallel to the discharge direction first in one direction and then in the opposite direction while continuing to discharge opposed identical streams of blasting media therefrom so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall of the interior chamber and treats transitional surfaces which join radially between the enlargement and the interior chamber; and

modifying the movement of the nozzle members when the gap is substantially aligned with the transverse passage so as to permit the deflected annular pattern of blasting media to enter into and effect surface treating of the transverse passage.

50. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece with an interior chamber having first and second chamber portions in aligned communication with one another, said second chamber portion being of larger cross section than said first chamber portion, and having first and second aligned access openings which communicate with opposite ends of the interior chamber;

providing first and second substantially identical elongated nozzle members having discharge openings at tip ends thereof;

inserting the first and second nozzle members into the interior chamber through the respective first and second access openings so that the nozzle members are substantially aligned and the discharge openings thereof are positioned in closely adjacent and directly opposed relationship to one another and define an unobstructed gap therebetween;

simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings of said first and second nozzle members;

simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings of said first and second nozzle members so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relation to the flow direction of the discharged streams to define a surrounding annular pattern for high energy impact with the boundary wall of the chamber in surrounding relationship to the gap; and

simultaneously moving the nozzle members, while maintaining them in stationary relationship to one another, lengthwise along the interior chamber parallel to the discharge direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall of the interior chamber; and

modifying the movement of the nozzle members when the gap therebetween moves from said first chamber section into said second chamber section so that the nozzle members move at a slower speed lengthwise of said second chamber section than when moving lengthwise through said first chamber section.

51. A process for treating the boundary walls of an interior chamber formed in a workpiece, comprising the steps of:

providing a workpiece (W) having an interior chamber (81), and first and second aligned access openings (82, 83) which communicate with opposite ends of the interior chamber;

providing first and second substantially identical elongated nozzle members (71, 71A) having discharge openings (74, 74A) at tip ends thereof;

inserting the first and second nozzle members (71, 71A) into the interior chamber (81) through the respective first and second access openings so that the nozzle members are substantially aligned and the discharge openings thereof are positioned in closely adjacent and directly opposed relationship to one another and define an unobstructed gap (91) therebetween;

simultaneously supplying substantially identical streams of pressurized blasting media, as defined by a pressurized high-velocity carrier fluid having solid abrasive particles entrained therein, to the discharge openings (74, 74A) of said first and second nozzle members (71, 71A);

simultaneously discharging substantially identical and substantially cylindrical opposed high-velocity streams of blasting media from said discharge openings (74, 74A) of said first and second nozzle members (71, 71A) so that the discharged cylindrical streams, almost immediately after discharge, directly impact one another within said gap (91) and cause the blasting media of both streams to be deflected radially outwardly in substantially perpendicular relation to the flow direction of the discharged streams to define a surrounding annular pattern (92) for high energy impact with the boundary wall of the chamber (81) in surrounding relationship to the gap (91); and

simultaneously moving the nozzle members, while maintaining them in substantially stationary lengthwise relationship to one another, lengthwise in one direction along the interior chamber (81) parallel to the discharge direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall lengthwise of the interior chamber.

52. A process according to Claim 51, wherein the substantially identical streams as discharged from said nozzle members have a velocity in the range of from about 30 feet per second to about 250 feet per second.

53. A process according to Claim 52, wherein the carrier fluid as supplied to said discharge nozzles comprises air at a pressure of about 80 to 90 psi.

54. A process according to Claim 51, including the additional step of simultaneously moving the nozzle members (71, 71A), while maintaining them in substantially stationary lengthwise relationship to one another, lengthwise in the opposite direction along the interior chamber (81) parallel to the discharge direction so that the blasting media as deflected outwardly into the annular pattern progressively treats the boundary wall lengthwise of the interior chamber.

EVIDENCE APPENDIX

No documents attached.

RELATED PROCEEDINGS APPENDIX

No documents attached.

PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant(s): Steven J. CARPENTER

Title : APPARATUS AND PROCESS FOR SURFACE TREATING INTERIOR OF WORKPIECE

Serial No. : 10/782 221 Group: 3723

Confirmation No.: 5300

Filed : February 19, 2004 Examiner: Shakeri

International Application No.: N/A

International Filing Date : N/A

Atty. Docket No.: Roto-Finish C-57A

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

FIRST CLASS MAILING CERTIFICATE

Sir:

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 9, 2005.

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Correspondence: Letter Transmitting Appeal Brief dated December 8, 2005, and all enclosures listed thereon

190.05/05

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LETTER TRANSMITTING APPEAL BRIEF

Sir:

Enclosed is Appellant's Brief on Appeal.

Also enclosed is Appellant's check in the sum of $250.00 representing payment of the Appeal Brief fee. The Commissioner is hereby authorized to charge any additional fee which may be required by this paper, or to credit any overpayment, to Deposit Account No. 06-1382. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

IN DUPLICATE

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Encl: Appellant's Brief on Appeal dated December 8, 2005,
and all enclosures listed thereon
Check ($250.00)

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